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Cultural Resource Management Report

SAWYER AND BURLINGTON TO MINOT
LEVEE CONSTRUCTION PHASE I
CULTURAL RESOURCES INVESTIGATION
OF BORROW AREAS, SOURIS RIVER PROJECT
WARD COUNTY, NORTH DAKOTA

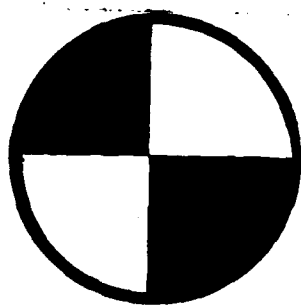
Written By:

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Date:

September 7, 1989

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1.0 INTRODUCTION

The Souris River Basin Project in North Dakota is a flood control measure to protect both urban and rural reaches of the Souris River. Flood control features in both Canada and the United States are involved. In Canada, the Alameda and Rafferty Reservoirs will be constructed for storage of flood waters and will also include the operation of a diversion channel between the Boundary Reservoir and the Rafferty Reservoir (COE 1989). In the United States, project features include the modification of the gated outlet at the existing Lake Darling Dam, structural improvements to various dams, spillways and other structures to mitigate effects to U.S. Fish and Wildlife lands in the Upper Souris and J. Clark Salyer Wildlife Refuges, mitigation of affects to rural farmsteads, both upstream and downstream of Lake Darling, and a water control plan for release of water downstream. Flood control levees will also be constructed at Renville County Park, Sawyer, Velva and between Burlington and Minot. When completed in 1991, the project will provide water supply and flood control benefits to Saskatchewan, Canada, and provide 100 year flood protection to the city of Minot, North Dakota. It will also reduce flood damages along the main stream of the Souris River in North Dakota (COE 1989). Most of the cultural resources investigations for these projects have already been completed.

The current contract, No. DACW3789M1099, is a cultural resources inventory of the borrow areas selected for the construction of levees at Sawyer and of the levees between Burlington and Minot in North Dakota. The Burlington to Minot levees include construction at six subdivisions: Tierrecita Vallejo, Johnson's Addition, Brook's Addition, Talbott's Nursery, Country Club Acres and Robinwood Estates, and King's Court and Rostad's Addition.

Five separate borrow areas are included in the survey area for this project, which totals 79 acres in size. Two of the borrow areas are located near Sawyer and three near Burlington. The borrow locations range in size from 1.5 acres to 42.5 acres. The project locations are shown in Figures 1 and 2. Photographic overviews of the areas are found in Figures 3 through 7. The specific locations and sizes of the project borrow areas are given in Table 1.

The contract was awarded to Powers Elevation Co., Inc., in May of 1989. The Phase I inventory of the areas was conducted by Mervin G. Floodman on June 22-23, 1989. A total of two person days were expended in the field effort. The field work was accomplished according to the scope-of-work in Appendix A. No artifacts were collected.

U.S. Army, Corps of Engineers
Borrow Areas for Sawyer and
Burlington to Minot Levee Construc-
tion, Souris River Basin Project
Sawyer, 7.5', 1948
Ward County, North Dakota

Figure 1
Sawyer Borrow Area Locations

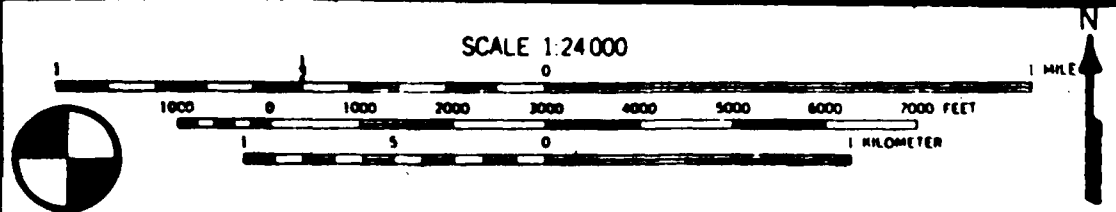
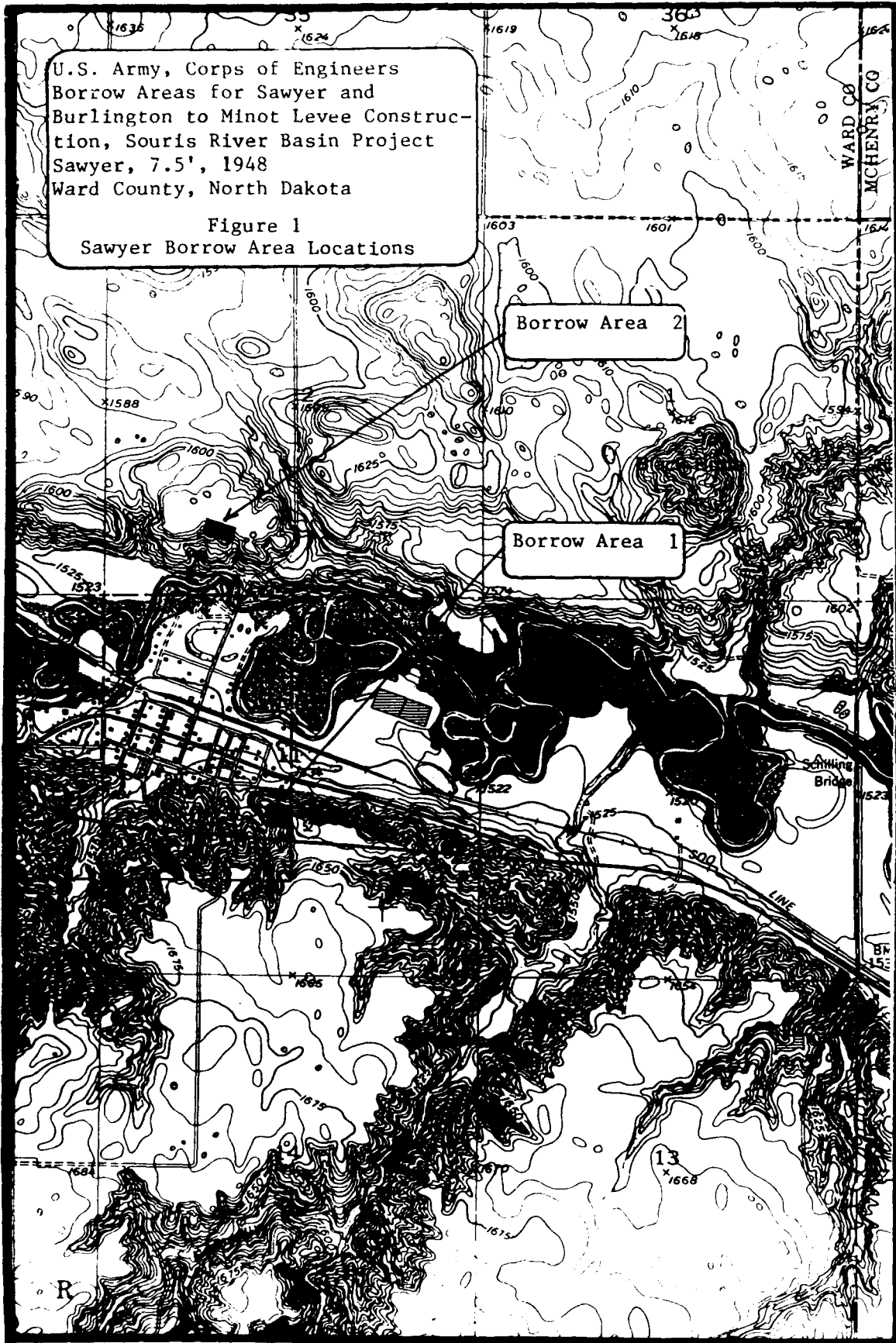


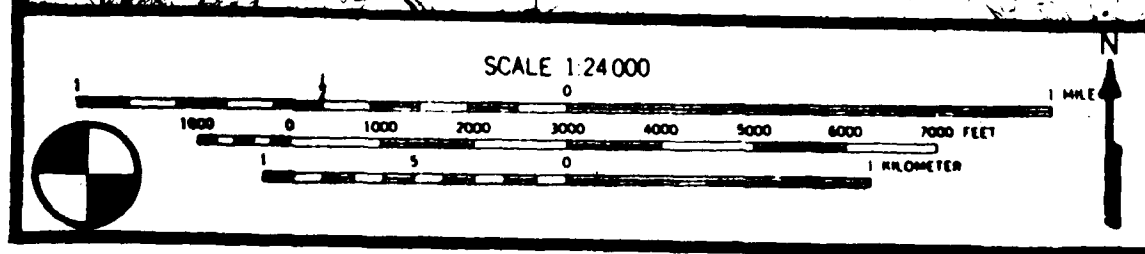
Figure 2
Burlington Borrow Area Locations

Site 32WD58

Borrow Area 1

Borrow Area 3

Borrow Area 2

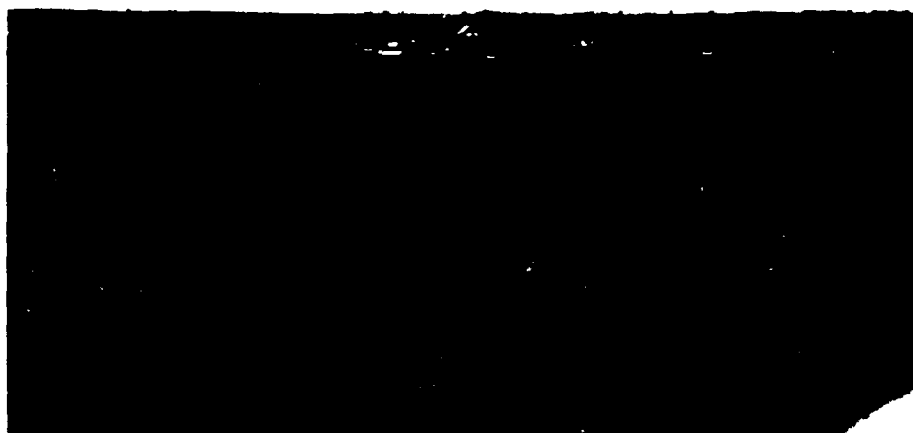




Sawyer Borrow Area 1, Overview toward the northwest to Sawyer.



Sawyer Borrow Area 1, Overview toward the west from highway.



Sawyer Borrow Area 2, Overview toward the south, toward Sawyer.



Sawyer Borrow Area 2, Close-up view of the ground surface.



Burkett, R. New, 1964. 1. Overview north
across hills.

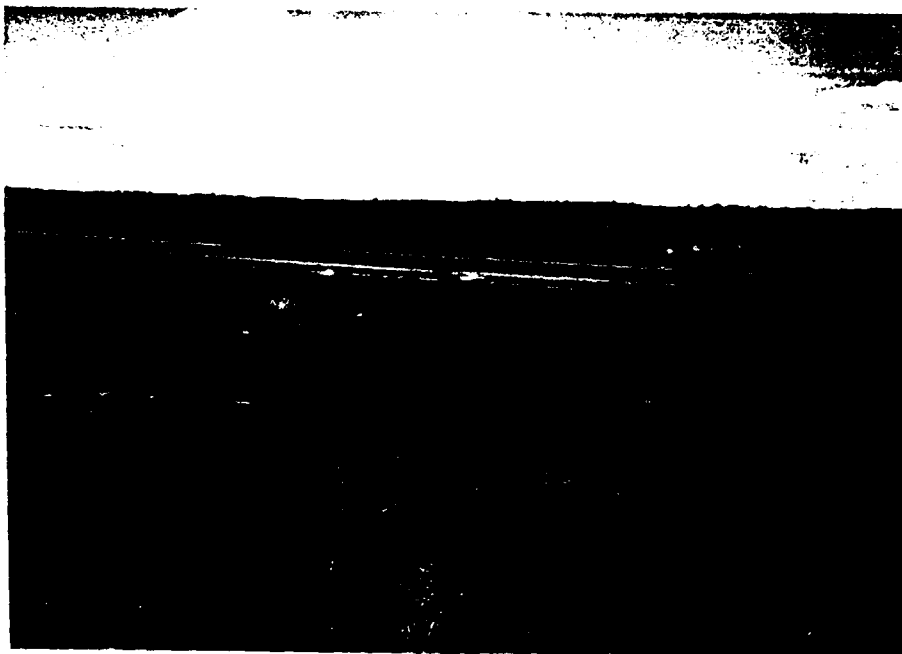




Burlington Borrow Area 2, Overview toward
the south.



Burlington Borrow Area 1, Overview toward
the south.



Burlington Borrow Area 3, Overview toward
the northeast.



Burlington Borrow Area 3, Overview toward
the northeast.

TABLE 1. PROJECT AREAS IN WARD COUNTY, NORTH DAKOTA

Sawyer	1)	NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 11, T.153N., R.81W.	2.5 Acres
	2)	NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 2, T.153N., R.81W.	1.5 Acres
Burlington	1)	NW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 1, T.155N., R.84W.	30.0 Acres
	2)	S $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 7, T.155N., R.83W.	42.5 Acres
	3)	NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 12, T.155N., R.84W.	2.5 Acres

The following report provides a summary of previous archaeological and historical studies in the project areas, describes the regional environment, describes the field methods, provides a detailed description of the inventory areas and results, and recommends future work necessary as a result of the project findings.

2.0 ENVIRONMENTAL SETTING

The environmental setting of the Souris River Basin was fully outlined by Powers in the 1982 survey report by Floodman et al. (1985). The following discussion is a brief summary localized to the project area in Ward County.

2.1 PHYSIOGRAPHY AND GEOLOGY

The project areas within Burlington and Sawyer in Ward County are found within the Souris River Valley, which is incised into the surrounding upland plains. The area is within the region of the Glaciated Plains, an undulating to flat topographic area of low relief. The modern landscape was formed by a Wisconsin glacier, which covered the region during the late Pleistocene. The Pleistocene Coleharber Group averages about 100 ft, or 30 m in thickness (Bluemler 1977).

The upland plains are within the region defined as ground moraine. It can be described as an undulating surface with numerous round, undrained depressions and sloughs, low mounds and elongated ridges. The surface is marked by numerous small glacial outwash channels (COE 1978).

The Souris River Valley is incised into the ground moraine plain. The valley was cut when the Souris River was filled by glacial meltwater as the glaciers retreated. The river gradually aggraded to its modern level after the final retreat of the ice sheet. The floor of the Souris Valley lies 100 to 200 ft, or 30 to 60 m below the level of the ground moraine

plain. The floor of the valley averages 0.75 miles in width, or 1.2 km. The modern stream channel is in a much oversized valley due to the enormous volumes of water as the glacier melted. The valley walls are steep-sided and are marked by a series of short, intermittent drainages that head within a few miles of the river valley and form a rugged, dendritic pattern (COE 1978). The drainages generally lack well developed terrace systems.

The project borrow areas are found, in general, within the areas described above as the rugged and deeply incised valley walls. The physiography is one of deep, steep-sided draws and intervening narrow ridges. The areas consist of gravel and till deposits from the glacial outwash and ground moraine plain.

2.2 VEGETATION

The dominant vegetation unit in the study area closely corresponds to Kuchler's (1964) Northern Floodplain Forest, characterized by Populus-Salix-Ulmus. Elements of the Oak Savanna (Quercus-Andropogon) vegetation unit are also present. Bur oak (Q. macrocarpa) occurs in the wooded side coulees. Big and little bluestem (Andropogon gerardi) and (A. scoparius) are also frequently interspersed in forested areas. Floodplain forests usually are spread out in a thin belt, up to about one half mile wide in places, connecting intermittent one to 25 acre wooded patches which lie within oxbow meanders along the river.

Low bottom species of the valley floor include American elm (Ulmus americanus), green ash (Fraxinus pennsylvanica), box elder (Acer negundo), and cottonwood (Populus spp.). Also present are black willow (Salix lutea) and western wildrose (Rosa woodsii). High bottom species cluster along the coulees adjacent to the river, and are dominated by wheatgrasses (Agropyron spp.) and gramma grasses (Bouteloua spp.). Low bottom areas in or near oxbows are interspersed throughout the floodplain forest, are not usually conducive to agriculture, and contain reeds (Calamagrostis inexpansa and Calmovilfa longifolia), blue gramma (Bouteloua gracilis), prairie cordgrass (Spartina pectinata) and sedges (Carex spp.). Other bottom areas may be converted to wild hay and used as pasture land.

The surrounding upland prairie maintains a wheatgrass-bluestem-needlegrass community (Agropyron-Andropogon-Stipa). Other common species of the prairie include Echinacea, Psoralea, and Solidago.

3.0 CULTURAL OVERVIEW

The following is a brief outline of the cultural framework for the prehistoric and historic periods for the project area under consideration. A full discussion of the cultural background for the project area can be found within the larger previous survey report from 1982 fieldwork (Floodman et al. 1985).

3.1 PREHISTORIC OVERVIEW

The primary sources for the cultural outline below are Reeves (1970), Willey (1966), Lehmer (1971), Frison (1978), and Syms (1977). The synopsis is brief, outlined within three broad cultural periods.

The Early Prehistoric Period (8500 B.C.-5500 B.C.) represents the earliest cultural period which can be conclusively demonstrated. This period is often referred to as the Paleo-Indian Period. The period is represented by three representative complexes: Clovis, Folsom, and Plano.

The Middle Prehistoric Period (5500 B.C.-A.D. 500) is often referred to as the Archaic period. It can be subdivided into Early, Middle, and Late Archaic stages. The Early Archaic is represented by the Mummy Cave/Logan Creek and the Oxbow complexes. The Middle Plains Archaic is highlighted by the appearance of the McKean Complex marked by the presence of McKean, Duncan, and Hanna projectile point styles. The Late Plains Archaic is noted by the appearance of the Pelican Lake Complex and later by the Besant/Sonota Complex. The Late Archaic is contemporaneous with the Middle Plains Woodland cultures which include the Sonota and Laurel complexes.

The Late Prehistoric Period (A.D. 500-A.D. 1800) is marked by changes in technology related to the appearance of the bow and arrow. Complexes associated with the Late Prehistoric Period include the Avonlea, Blackduck and Old Women's Complexes. Lehmer's (1971) Middle Missouri and Coalescent traditions noted from studies along the Missouri River, are features of this period as well. On the Northeastern Plains, the Devils Lake-Sourisford Complex is also present. The little known Mortlach Complex or Aggregate is also a feature of the Late Prehistoric Period, as is the Cluny Complex. The period is also marked by a series of little known cultures showing a high degree of Canadian influences, as well as traits of the Middle Missouri cultures.

3.2 HISTORIC OVERVIEW

The historic period in the Souris River Valley began with the first direct contact between Euro-Americans and the native tribes in the region. A long period of exploration followed during which the fur trade determined the nature of the relationship between the two cultural groups. While the territory changed hands from France to Spain to England to the United States, the area remained isolated and unsettled. With the discovery of gold in Montana in 1861, this began to change. Military forts were established along the Missouri River and attempts to open wagon trails to the Souris River area were made. Conflict with the Sioux prevented permanent settlements. Toward the end of the 1870s, the Sioux had been confined to reservations and railroads began building westward through the area. The arrival of the railroad resulted in the first Euro-American settlements in the area and was associated with range cattle in 1880. At the turn of the century, a second boom in settlement occurred, stimulated by the expansion of rail lines, platting of new townsites, and cash-crop agriculture. Adverse environmental and economic factors hurt the small ranches and farms, resulting in an out-migration of the area after 1910. The trend of abandonment continued through the 1920s. Towns such as Minot, Velva, and Sawyer developed as regional trade centers. The city of Sawyer developed from the 1890s expansion of railroads and became a post office in 1898. It was platted in 1902. The economy of Sawyer was boosted by lignite mining. Six mines operated within a ten mile radius of Sawyer in 1906. The above is summarized from Floodman et al. (1985).

4.0 PREVIOUS INVESTIGATIONS

A literature and files search of the project areas was undertaken on June 2, 1989, by Nick G. Franke, at the State Historical Society of North Dakota offices in Bismarck, North Dakota. The files search was centered on the five project sections identified in Table 1 for Ward County.

Files inspected at the State Historic Preservation Office included the National Register Listings, the site location catalog, the survey report catalog, and the uncataloged survey reports. All relevant survey reports were inspected.

Sawyer Borrow Area #1 is found in Section 11, T.153N., R.81W. A total of four site leads and fourteen cultural sites are recorded in this section. None of these resources are found in the immediate vicinity of the borrow area. The resources are summarized below:

Site Lead: NE $\frac{1}{4}$ Section 11; Echo Post Office reported by Tweton in REAP 1978.

Site Lead: Center NE $\frac{1}{4}$ Section 11; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 11; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: On line between SE $\frac{1}{4}$ Section 11 and NE $\frac{1}{4}$ Section 14; Habitation, from map with W.P.A. survey report by Hecker 1938.

32WD25: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD26: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD27: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD28: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD29: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD30: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD31: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD32: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD38: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD39: NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD40: NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD41: NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD42: SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

32WD43: SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 11; Historic, recorded by Schweigert 1982.

The above sites recorded by Schweigert in 1982 were part of the original survey of the Sawyer levees, conducted by Powers Elevation. The survey consisted of a 200 ft wide corridor through portions of the NW $\frac{1}{4}$ of Section 11. The survey is reported in Floodman et al. (1985). The plans for the levees at Sawyer were altered and a second survey was conducted by Powers (Floodman 1989). This survey also consisted of a 200 ft wide corridor along portions of the right-of-way, and involved shovel testing. No materials or sites were recorded by the second survey. One additional report deals with portions of Section 11. Schneider (1977) conducted a literature review and preliminary cultural resource inspection of portions of the Burlington Dam. No precise statement of the areas surveyed is found in the report.

Sawyer Borrow Area #2 is found in Section 2, T.153N., R.81W. This Section revealed no previously recorded sites or site leads. Two previous surveys were conducted in the section. Schneider (1977) conducted a literature review and preliminary reconnaissance of the proposed Burlington Dam in portions of this Section. No precise statement of the areas inventoried is contained in the report. A second survey was conducted by Floodman (1989), involving a modification to the Sawyer levee program. The survey was located in the bottomlands, by the river, in the S $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 11.

Burlington Borrow Area #1 is found in Section 1, T.155N, R.84W. A total of eight site leads and one recorded site are found in this Section. One of the site leads is relatively close to the project area, the remaining leads and the recorded site are outside the project area. The cultural resources are summarized below:

Site Lead: E $\frac{1}{4}$ SW $\frac{1}{4}$ Section 1; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: N $\frac{1}{4}$ SE $\frac{1}{4}$ Section 1; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 1; Historic Scotty Coal Mine, from State Engineers Report 1909-10 reported by Dill 1976.

Site Lead: NE $\frac{1}{4}$ Section 1; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: Section 1; Historic Conan Coal Mine, from State Engineers Report 1909-10 reported by Dill 1976.

Site Lead: SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 1; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead (32WDX156): NW $\frac{1}{4}$ Section 1; chipped stone reported by Dill 1979.

Site Lead (32WDX162): Section 6, T.155N., R.83W.; Section 12, T.155N., R.84W; Section 18, T.155N., R.83W; and Section 1, T.155N., R.84W.; Historic Colton Coal Mine, from State Engineers Report 1914-16 reported by Dill 1976.

323WD44: NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 1; Historic, reported by Schweigert 1982.

The recorded historic site by Schweigert was part of a "wind-shield survey" of Section 1, conducted for the historical resources survey by the University of North Dakota (Schweigert 1979). Other work in this Section include Schneider (1977) in a literature review and preliminary field reconnaissance of the Burlington Dam area; no specific areas of the survey are noted in the report. One additional survey was conducted in the section by Good (1980). The project involved testing of three sites and a survey of a road detour in Section 1. The road detour survey was located along the north section line in the NE $\frac{1}{4}$.

Burlington Borrow Area #2 is found in Section 7, T.155N, R.83W. This section records a total of three site leads and two cultural sites. None of the reported materials are within the survey area of this project. The cultural resources are summarized below:

Site Lead: Center W $\frac{1}{2}$ E $\frac{1}{2}$, Section 7; Historic Wallin Coal Mine, from State Engineers Report 1914-16, reported by Dill 1976.

Site Lead: SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 7; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: Center SW $\frac{1}{4}$ Section 7; Habitation, from map with W.P.A. survey report by Hecker 1938.

32WD35: SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 7, Historic reported by Schweigert 1982.

32WD36: SW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 7, Historic Housing Development, reported by Schweigert 1982.

Three reports are found in the literature review of Section 7. The first is by Schneider (1977) and again concerns the literature review and preliminary field work for the proposed Burlington Dam. No precise areas of survey are mentioned in the report. Schweigert (1979) reports a "windshield survey" for historic sites in this section, none were recorded. The two recorded sites are from Powers 1982 inventory of the Burlington to Minot levees (Floodman et al. 1985). A levee corridor 200 feet in width was inventoried in the SW $\frac{1}{4}$ of Section 7 by this project.

Burlington Borrow Area #3 is found in Section 12, T.155N., R.84W. A total of nine site leads are recorded for this Section. None are pertinent to the borrow area survey. The cultural resources are listed below:

Site Lead: SE $\frac{1}{4}$ Section 12; Historic Davis Townsite/Coal Mine, reported by Tweton in REAP 1978.

Site Lead: NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 12; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 12; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 12; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: SW $\frac{1}{4}$ Section 12; Vertebrate fossil, reported by Holland in REAP 1978.

Site Lead: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 12; Habitation, from map with W.P.A. survey report by Hecker 1938.

Site Lead: NW $\frac{1}{4}$ Section 12; 1885 Building, No Standing Remains, reported by Schweigert 1978.

Site Lead: NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 12; Historic Davis Coal Mine, from State Engineers Report 1909-10, reported by Dill 1976.

Site Lead (32WDX162): Section 12, T.155N., R.84W.; Section 6, T.155N., R.83W.; Section 1, T.155N., R.84W.; Historic Colton Coal Mine, from State Engineers Report 1909-10, reported by Dill 1976.

Four survey reports are on file for Section 12. Schneider (1977) conducted a literature review and preliminary field

reconnaissance for areas of the proposed Burlington Dam. The report contains no precise areas of survey. Schweigert (1979) conducted an historic "windshield survey" of the area of Section 12, east of Highway 2. Franke (1976) conducted a survey for an unspecified location for Highway Department Project RF-4-002()132. A 200 ft wide survey was conducted for a segment of the Burlington to Minot levees in the NE $\frac{1}{4}$ and NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 12. The final report is in Floodman et al. (1985). No sites were recorded by the above project inventories.

5.0 FIELD METHODOLOGIES

The project borrow areas were located using the attached topographic figures from the COE (1989) scope-of-work. These maps and a county road atlas were utilized to locate the areas of the projected borrow operations. The areas of impact were taken from the topographic maps and the extent was estimated by observation of topographic features, project fencelines and by pacing. The surveys consisted of 100% on-the-ground coverage of each area sufficient to determine on the presence/absence of any cultural resource located within the project borders.

The impact areas were carefully inspected using a pedestrian transect interval no larger than 15 m, as specified by the scope-of-work. Exact methods varied somewhat from area to area given the type of terrain, visibility and features present. Closer intervals were utilized on ridges where site potential is greater, and the steeply sloping ridge slopes of over 20% were not systematically walked, except to gain access to adjacent areas of inventory.

However, cutbanks and likely site areas along the tops of these slopes were carefully inspected. The bottoms of steep slopes were walked to check for materials which may have washed down. Also, the slopes were visually inspected during the course of the survey to be certain that cultural materials were not present.

Surface areas in all locations were carefully scrutinized in areas where surface visibility permitted such scrutiny. In pastures and prairie not previously cultivated, careful attention was given for potential stone circles or rock cairn features. Open, cleared areas, cattle trails, wheel ruts, cutbanks, ditches, rodent mounds, erosional areas, and rodent backdirt mounds, in general, any area offering surface or subsurface visibility, was inspected.

Given the nature of the survey areas, no subsurface testing was conducted at the project locations. All were located in areas of shallow and minimal soil development over glacial gravels and tills. Visibility was adequate to assess the presence/absence of cultural materials. Deeply buried or stratified cultural materials were not to be expected in the proposed borrow areas at these project locations. The cultural materials located in Burlington Borrow Area #1 were flagged with orange pin flags to define the site extent and limits. The site was mapped by Brunton compass and pacing. The site was then recorded on a North Dakota Cultural Resource Site Form.

The project areas were inventoried over the period of June 22 to 23, 1989 by Mervin G. Floodman of Powers Elevation Co., Inc.

6.0 BORROW AREAS AND RESULTS

The five borrow areas inspected for the Sawyer and Burlington to Minot Levees in Ward County, North Dakota, are discussed individually in the sections below. The areas are described in detail and the results of the inventory are presented. The areas are discussed in the order presented in Table 1.

6.1 SAWYER BORROW AREA 1 NE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, SECTION 11, T.153N., R.81W.

The Sawyer Borrow Area 1 is 2.5 acres in size. It is located along the upper river bluffs on the south side of the Souris River Valley. It is found between the new location of Highway 52 and the town of Sawyer. The proposed borrow area consists of a narrow northwest-southeast trending finger ridge off of the main bluff line, and its associated sideslopes and draws.

The hilly area is used for ATV and dirt bike recreational activities and trails cross the crests and slopes of the ridge. The ridge crest is eroded with 60 to 70% surface visibility. The surface is littered by gravels and clay. The upper ridge area has larger cobbles of glacial origin. This area is eroding along the west edge with 30 to 35% visibility. The side-slopes of the ridge are steep and heavily vegetated. Native grasses and brush are found on the slopes and the draw bottoms.

No cultural materials, nor cultural features, were noted during the survey of Borrow Area 1. Given the erosion and visibility, coupled with the lack of soil development, the potentials for sites not observed in the project area is

believed to be minimal to non-existent. No further work is recommended.

6.2 SAWYER BORROW AREA 2, NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, Section 2, T.153N., R.81W.

Sawyer Borrow Area 2 is 1.5 acres in size. It is located on the upper bluffs north of the Souris River Valley. The borrow area is adjacent to the edge of the bluffs/breaks and includes a small lobe of the main upper ridge. The area is in native prairie grasses and has never been cultivated.

Visibility within the project area is fair. Observable surface areas are limited to occasional cattle trails, numerous rodent backdirt mounds, and deflational areas. Overall visibility is estimated at 20 to 25%.

One large erosional area is present on the very south end of the project area (Figure 4). The erosional bank reveals a good view of the area soils. The topsoil consists of 10 to 15 cm of sandy loam overlying a gravel. All visible areas of the project and all backdirt mounds are littered with the underlying gravel deposit. Several large glacial erratic boulders are present on the upper areas as well as smaller cobbles.

No cultural features or materials were noted by the project inventory. Given the surface and subsurface visibility in the project location from rodent mounds, trails and erosion, the potential for buried sites not observed is minimal to non-existent. No further work is recommended.

6.3 BURLINGTON BORROW AREA 1, NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 1, T.155N., R.84W.

The Burlington Borrow Area 1 is 30 acres in size. It is found east of Burlington on the eastern wall of the Souris River Valley. The eastern areas are characterized by several narrow, eroded ridge arms, which extend east to west from the main upper valley bluff line. The ridge sideslopes are steep and drop into heavily wooded draws. The area is characterized by rugged topography and high relief. The very western portion of the survey zone, adjacent to the highway, is a gently sloping plain above a meander of the Souris River immediately to the west and across the highway. This area is cultivated and consists of wheat and a narrow band of onions on the very east edge of the field.

The northeastern-most corner of the project area is an existing gravel pit quarry. This area is heavily utilized for gravel quarrying and lacks all integrity. The ridges and hills to the south are very narrow, topped from headward erosion of the draws. The upper ridges have visibility of about 60% and are heavily eroded. The sideslopes are steep and have a denser vegetation. The draw bottom contains a dense hardwood ecotone and associated understory with less visibility.

The very southwest corner of the survey is modern buildings and equipment from a trucking company. The features and materials are too recent to record as sites.

The cultivated field offered excellent visibility of 80 to 90%. The field has a very immature and sparse crop of wheat over most of the field area and a narrow strip of onion on the east edge. This field contained a wide scatter of cultural materials which were recorded as site 32WD58.

Site 32WD58 is located in the $W\frac{1}{2}NW\frac{1}{4}NE\frac{1}{4}$ of Section 1, T.155N., R.84W. This site is estimated to cover approximately 14,800 square meters of area within the cultivated field. It consists of a very sparse and widely dispersed scatter of cultural materials. Observed are lithic tools, debris, and bone fragments. A total of 13 artifacts were observed and perhaps 10+ bone fragments. These materials were not concentrated, but widely dispersed with occasional clusters of two to three artifacts in fairly close proximity. Lithic materials at the site are predominantly Knife River flint, with some quartzite and chert. No cultural or temporal diagnostics were noted and the site is of unknown cultural affiliation. The site form is presented in Appendix B.

This area is impacted from the effects of modern cultivation practices. The upper plowzone contexts lack integrity of context. From the very sparse surface content of the site, given the excellent visibility, the site would appear to have limited potentials. However, the lack of sub-plowzone integrity and cultural context has not been verified by subsurface testing. Full assessment and determination of site significance and NRHP eligibility would require a subsurface testing program.

As the site is found in the lower area of the survey on a flat to gently sloping plain, it may not be affected by the proposed borrow areas, which would concentrate on the gravel ridges and hills to the east. It is possible the site may be avoided and no further work necessary.

6.4 BURLINGTON BORROW AREA #2, S $\frac{1}{2}$ NW $\frac{1}{4}$, Section 7, T.155N.,
R.83W.

Burlington Borrow Area 2 is 42.5 acres in size. It is also located on the east side of the Souris River Valley along the rugged and eroded breaks with a high topographic relief. The topography consists of a series of remnant ridges and hills with steep-sided walls and intervening draws.

The remnant ridges are very narrow across the top and massively eroded. The narrow surfaces with sharp breaking slopes provide little room or potential for habitational sites. The upper areas are native prairies with visibility of 40 to 50%. The sides are more heavily vegetated and the draw bottoms are covered by dense vegetation including grasses and hardwoods.

This area is being utilized today for residential developments. The 1948 map was photo-revised in 1979. The area exhibits more new housing than shown on this map and more are being constructed at this time. The eastern side is County Club Heights development. The west end has most of the new housing. All of these houses are very recent in origin (1980s) and none were recorded as sites.

No cultural materials or features were recorded by the inventory of Borrow Area 2. The surface visibility was adequate for location and recordation of cultural sites. No further work is recommended in this area.

6.5 BURLINGTON BORROW AREA 3, NW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 12, T.155N.,
R.84W.

Burlington Borrow Area 3 is 2.5 acres in size. This area is located on the west side of the Souris River Valley on the flatter, more gently sloping bottomland at the base of the eroded breaks zone. The area consists of low rolling hills of gentle relief at the colluvial toe slopes of the valley wall. Vegetation consists of prairie grasses and a medium-dense stand of secondary weeds.

This entire area is disturbed and lacking context and integrity. The area apparently has been utilized as a borrow and construction area in the recent past. U.S. Highway 2 and 15 is now a four lane highway and bypasses Burlington to the south along the valley breaks zone. The highway right-of-way abuts the inventory area on the north. This construction has apparently blitzed most of this borrow area and overall visibility in the disturbed area is 40%.

No cultural materials or features were located in this inventory area. Potentials for intact sites not observed is non-existent. No further work is recommended in this borrow area.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The Powers inventory of the five proposed borrow areas for the Sawyer and Burlington to Minot Levee construction projects revealed one cultural resource site. This site is found within the Burlington Borrow Area 1. The remaining two borrow areas at Burlington and the two borrow areas at Sawyer contained no cultural resource sites. The field methodology utilized and the surface conditions of the survey tracts were adequate for the location of cultural resource sites. The Potential for significant, intact cultural deposits not observed in these borrow areas is believed to be minimal. No further work for these areas is recommended.

Site 32WD58 is recorded within the very westernmost end of the survey tract for the Burlington Borrow Area 1. It is found in the low area of the cultivated field at the base of the hilly areas of the breaks zone. It should be possible to utilize the remaining area as a source of fill and avoid the recorded site area completely. No additional materials are located in the more rugged breaks zone, which is the location of the borrow materials. As this site is of undetermined eligibility to the NRHP, it is recommended that this site be avoided. If the site cannot be avoided, a Phase II testing program to evaluate the site for evidence of intact cultural deposits beneath the modern plowzone should be implemented prior to construction. If the site can be avoided, clearance for the remaining areas of the survey tract is recommended.

Marcia J. Tate 9/7/89
Marcia J. Tate Date
Principal Investigator

8.0 REFERENCES CITED

- Bluemle, J.P.
1977 The Face of North Dakota: The Geologic Story.
Educational Series II. North Dakota Geological Survey,
Grand Forks.

- Floodman, M., P. Friedman, and K. Schweigert
1985 Final Report of the 1982 Cultural Resources For the Lake Darling - Souris River Project, North Dakota. Prepared for the St. Paul District Corps of Engineers. Powers Elevation Co., Inc., Denver, Colorado.
- Floodman, M.
1989 Final Report of a Phase I Cultural Resources Survey of the Levee Modification at Sawyer, Ward County, North Dakota. Prepared for the St. Paul District Corps of Engineers. Powers Elevation Co., Inc., Denver, Colorado.
- Franke, N.G.
1976 North Dakota Highway Department Project No. R.F.-4-002()132 Negative Declaration Survey Report. State Historical Society of North Dakota, Bismarck.
- Frison, G.C.
1978 Prehistoric Hunters of the High Plains. Academic Press, New York.
- Good, K.
1980 Testing of Three Sites and Survey of a Road Detour within Proposed Project Construction Zones, Burlington Dam Flood Control Project Area, Upper Souris River, North Dakota. Submitted to St. Paul District Corps of Engineers. University of North Dakota, Grand Forks.
- Kuchler, A.W.
1964 Potential Natural Vegetation of the Co-Terminus United States. American Geological Society, Special Publications No. 36.
- Lehmer, D.
1971 Introduction to Middle Missouri Archaeology. National Park Service, Anthropology Paper No. 1.
- Reeves, B.O.K.
1970 Culture Change in the Northern Plains 100 B.D. to A.D. 1000. Unpublished Ph.d. Dissertation, University of Calgary.
- Schneider, F.
1977 Preliminary Cultural Resource Investigation of the Upper Souris River Basin, North Dakota. Prepared for St. Paul District Corps of Engineers. University of North Dakota, Grand Forks.

Schweigert, Kurt

1979 Historical Cultural Resource Survey of the Upper Souris River, North Dakota. Report submitted to St. Paul District Corps of Engineers by the University of North Dakota, Grand Forks.

Syms, E.L.

1977 Cultural Ecology and Ecological Dynamics of the Ceramic Period in Southwestern Manitoba. Plains Anthropologist 22(79) Memoir 12, Part 2.

U.S. Department of the Army, Corps of Engineers

1978 Environmental Impact Statement: Flood Control Burlington Dam, Souris River, North Dakota. U.S. Department of the Army, St. Paul District, Corps of Engineers.

1989 Scope of Work: Phase I Cultural Resources Investigation of Proposed Borrow Areas For Burlington to Minot and Sawyer Levees, Souris River Basin Project, North Dakota. St. Paul District, Department of the Army, Corps of Engineers.

Willey, G.

1966 An Introduction to American Archaeology. Prentice Hall, Englewood Cliffs, New Jersey.

APPENDIX A
Scope-of-Work

SCOPE OF WORK
PHASE I CULTURAL RESOURCES INVESTIGATION
OF PROPOSED BORROW AREAS FOR BURLINGTON
TO MINOT AND SAWYER LEVEES, SOURIS
RIVER BASIN PROJECT, NORTH DAKOTA

1.00 INTRODUCTION

1.01 The Contractor will undertake a Phase I cultural resources investigation of the borrow areas selected for use in conjunction with flood control levee construction at Sawyer, North Dakota and at six subdivisions along the Souris River between Burlington and Minot, North Dakota. This levee construction is part of the Souris River Basin Project in North Dakota.

1.02 This investigation partially fulfills the obligations of the Corps of Engineers (Corps) regarding cultural resources, as set forth in the National Historic Preservation Act of 1966 (Public Law [PL] 89-665), as amended; the National Environmental Policy Act of 1969 (PL 91-190); Executive Order (EO) 11593 for the "Protection and Enhancement of the Cultural Environment" (Federal Register, May 13, 1971); the Archeological and Historical Preservation Act of 1974 (PL 93-291); the Advisory Council on Historic Preservation "Regulations for the Protection of Historic and Cultural Properties" (36 CFR, Part 800); and the applicable Corps regulations (ER 1105-2-50).

1.03 The laws listed above establish the importance of Federal leadership, through the various responsible agencies, in locating and preserving cultural resources within project areas. Specific steps to comply with these laws, particularly as directed in PL 93-291 and EO 11593, are being taken by the Corps "... to assure that Federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures, and objects of historical, architectural, or archeological significance." A part of that responsibility is to locate, inventory, and nominate to the Secretary of the Interior all such sites in the project area that appear to qualify for listing on the National Register of Historic Places.

1.04 EO 11593 and the 1980 amendments to the National Historic Preservation Act further direct Federal agencies "... to assure that any federally owned property that might qualify for nomination is not inadvertently transferred, sold, demolished or substantially altered." In addition, the Corps is directed to administer its policies, plans, and programs so that federally and non-federally owned sites, structures, and objects of historical, architectural, or archeological significance are preserved and maintained for the inspiration and benefit of the people.

1.05 This cultural resources investigation will serve several functions. The report will be a planning tool to aid the Corps in meeting its

obligations to preserve and protect our cultural heritage. It will be a comprehensive, scholarly document that not only fulfills federally mandated legal requirements but also serves as a scientific reference for future professional studies. It will identify resources that may require additional investigations and that may have potential for public-use development. Thus, the report must be analytical, not just descriptive.

2.00 PROJECT DESCRIPTION

2.01 The authorized Souris River Basin Project is a flood control project for urban and rural reaches of the Souris River in North Dakota. The project involves flood control features in both the United States and Saskatchewan, Canada.

2.02 Features in Canada include the construction of the Alameda and Rafferty reservoirs for flood storage and the operation of a diversion channel between the Boundary reservoir and the Rafferty reservoir.

2.03 Features in the United States include modification of the gated outlet structure at the existing Lake Darling Dam; mitigation of project-related impacts to U.S. Fish and Wildlife Service lands by making structural improvements to various dams, spillways, and other flood control structures in the Upper Souris and J. Clark Salyer Wildlife Refuges; mitigation of project-related impacts to farmsteads upstream and downstream of Lake Darling; and a water control plan for the safe release of water downstream. The overall project also includes flood control levees at Renville County Park, at Sawyer and Velva, North Dakota, and between Burlington and Minot, North Dakota, as well as channel modification at Minot. Construction of the Velva levee and the Minot channel modification have already been completed.

2.04 The purchase and operation of flood storage in Saskatchewan is a joint effort between Canada and the United States. When construction is completed in 1991, the project will provide water supply and flood control benefits to the Province of Saskatchewan, provide 100-year flood protection to the city of Minot, North Dakota, and significantly reduce flood damages along the main stem of the Souris River in North Dakota.

2.05 Cultural resources surveys have been conducted for the majority of the project features discussed above. In addition, Saskatchewan has conducted cultural resources investigations of the proposed Alameda and Rafferty reservoirs in Canada.

2.06 The lands to be surveyed for this contract are the borrow areas selected for use in connection with the following proposed Souris River Basin Project flood control improvements in North Dakota: levee construction at Sawyer, North Dakota and levee construction at six subdivisions (Tierrecita Vallejo, Johnson's Addition, Brook's Addition, Talbott's Nursery, Country Club Acres and Robinwood Estates, and King's Court and Rostad's Addition) between Burlington and Minot, North Dakota.

2.07 A total of 79 acres is to be surveyed for cultural resources under this contract. Specific locations and sizes of the individual borrow areas to be surveyed are as follows:

for Burlington to Minot levees (ref. U.S.G.S. 7.5' Burlington quad)

Borrow Site #1	NW1/4NE1/4, Sec. 1, T155N, R84W, Ward Co.	30.0 acres
Borrow Site #2	S1/2NW1/4, Sec. 7, T155N, R83W, Ward Co.	42.5 acres
Borrow Site #3	NW1/4NW1/4, Sec. 12, T155N, R84W, Ward Co.	2.5 acres

for Sawyer levee (ref. U.S.G.S. 7.5' Sawyer quad)

Borrow Site #1	NE1/4NE1/4SW1/4, Sec. 11, T153N, R81W, Ward Co.	2.5 acres
Borrow Site #2	NW1/4SE1/4SW1/4, Sec. 2, T153N, R81W, Ward Co.	1.5 acres

3.00 DEFINITIONS

3.01 Cultural Resources include any building, site, district, structure, object, data, or other material relating to the history, architecture, archeology, or culture of an area.

3.02 A Phase I Cultural Resources Investigation is an intensive, on-the-ground study of an area sufficient to determine the number and extent of the resources present and their relationships to project features. It will provide (1) data adequate to assess the general nature of the sites present; (2) recommendations for additional testing of those resources that may provide important cultural and scientific information; and (3) detailed time and cost estimates for Phase II testing.

3.03 Phase II Testing is the intensive testing of a resource that may provide important cultural or scientific information. This testing will result in (1) information adequate to determine whether the resource is eligible for inclusion on the National Register of Historic Places; (2) a Phase III mitigation plan for any eligible resources that will undergo a direct or indirect impact; and (3) detailed time and cost estimates for the mitigation.

3.04 Phase III Mitigation is the mitigation of the direct or indirect impacts of construction upon eligible sites through the systematic removal of data. It typically includes the excavation of either complete cultural deposits or a systematic sample of them and the thorough analysis and interpretation of the data recovered. The excavation, analysis, and interpretation methods must be adequate to address the important research questions based on which the resource was determined eligible. In addition, because the mitigation process destroys the resource, data should be recovered that may be needed to address future research questions.

4.00 SURVEY REQUIREMENTS

4.01 The Contractor will conduct a Phase I cultural resources investigation of the borrow areas selected for use in conjunction with

levee construction at Sawyer, North Dakota and at six subdivisions on the Souris River between Burlington and Minot, North Dakota, in accordance with Sections 2.07 and 3.02 above.

4.02 The Contractor's work will be subject to the supervision, review, and approval of the Contracting Officer's representative.

4.03 The Contractor will employ a systematic, interdisciplinary approach in conducting the study, using techniques and methods that represent the current state of knowledge for the appropriate disciplines. The Contractor will provide specialized knowledge and skills as needed, including expertise in archeology, history, and other social and natural sciences.

4.04 The Contractor will provide all materials and equipment necessary to perform the required services expeditiously.

4.05 The Contractor's survey will be an on-the-ground examination sufficient to determine the number and extent of any cultural resources present, including standing structures as well as prehistoric and historic archeological sites.

4.06 The Contractor's survey will include surface inspection in areas where surface visibility is adequate to reveal any cultural materials that are present and subsurface testing in all areas where surface visibility is inadequate. Subsurface investigation will include shovel testing, coring, soil borings, cutbank profiling, or other appropriate methods. If the field methods used vary from those that are required, they must be described and justified in the Contractor's report.

4.07 The survey interval required for subsurface testing is 15 meters (50 feet). However, this interval may vary depending upon field conditions, site density, or size. If a larger interval is used, this decision must be justified in the Contractor's report.

4.08 The Contractor will screen all subsurface tests through 1/4-inch mesh hardware cloth.

4.09 The Contractor will return all surveyed areas as closely as practical to presurvey conditions.

4.10 The Contractor will recommend any Phase II testing measures that are warranted, including time and cost estimates.

4.11 If it becomes necessary in the performance of the work and services, the Contractor will, at no cost to the Government, secure the rights of ingress and egress on properties not owned or controlled by the Government. The Contractor will secure the consent of the owner, or the owner's representative or agent, in writing prior to effecting entry on such property. If requested, a letter of introduction signed by the District Engineer can be provided to explain the project purposes and request the cooperation of landowners. Where a landowner denies permission for survey, the Contractor must immediately notify the Contracting Officer's

representative and must describe the extent of the property to be excluded from the survey.

4.12 The Contractor must keep standard records that include field notes and maps, site survey forms, subsurface testing forms, and photographs.

4.13 State site forms will be prepared for all sites discovered during the survey, and records on previously reported sites will be updated if new information is obtained. Data should be included on the present condition of each site and on the contents and locations of any collections from it. The Contractor will also submit all site forms and updates to the appropriate State agency.

4.14 Cultural materials and associated records from the study should be curated at an institution that can ensure their preservation and make them available for research and public view. Curation should be within the State and as close as possible to the project area. The Contractor will be responsible for making curatorial arrangements, coordinating them with the appropriate officials of North Dakota, and obtaining approval from the Contracting Officer's representative.

5.00 GENERAL REPORT REQUIREMENTS

5.01 The Contractor will submit the following documents, described in this section and Section 6.00: a field report, field notes, a draft contract report, and a final contract report.

5.02 The Contractor's field report will be a brief summary of the nature, extent, and results of the field work conducted. It will be in the form of a telephone call to the Contracting Officer's representative.

5.03 The Contractor's field notes will include legible copies of important notes and records kept during the investigation. Especially important are the daily field journal of the Principal Investigator or field director, field site survey forms, and subsurface testing forms. One copy of these notes should be submitted to the Contracting Officer's representative with the draft contract report but should not be bound into the report.

5.04 The draft contract report will detail the approach, methods, and results of the investigation, and make recommendations for further work. It will be submitted to the Contracting Officer's representative, who will review it and forward it to other appropriate agencies for review. Comments will be returned to the Contractor, who will make the necessary revisions and submit the final contract report.

5.05 The Contractor's draft and final reports will include the following sections, as appropriate to the study. The length of each section depends on the level of detail required of the study and the amount of information available. The reports should be as concise as possible, yet provide all the information needed for evaluating and managing the project and for future reference.

a. Title page: The title page will provide the following information: the type of study; the types of cultural resources assessed (archeological, historical, and architectural); the project name and location (county and state); the date of the report; the Contractor's name; the contract number; the name of the author(s) and/or Principal Investigator; the signature of the Principal Investigator; and the agency for which the report is being prepared.

b. Table of contents

c. List of figures

d. List of plates

e. Introduction: This section will identify the sponsors (Corps of Engineers) and their reason for the study and present an overview of the study with each site located on USGS quad maps. It will also define the location and boundaries of the study area (using regional and area-specific maps); define the study area within its regional cultural and environmental context; reference the scope of work; identify the institution that did the work and the number of people and person-days/hours involved; give the dates when the various phases of the work were completed; identify the repository of records and artifacts; and provide a brief outline of the report and an overview of its major goals.

f. Previous archeological and historical studies: This section will briefly summarize and evaluate previous archeological and historical research in the immediate study area including the researchers, dates, extent, adequacy, and results of past work and any cultural/behavioral inferences derived from it.

g. Environmental background: This section will briefly describe the current and prehistoric environment of the study area, including its geology, vegetation, fauna, climate, topography, physiography, and soils. The relationship of the environmental setting to the area's prehistory and history should be stressed. The level of detail in this section will be commensurate with that of the other report sections.

h. Theoretical and methodological overview: This section will state the goals of the sponsor and the researcher, the theoretical and methodological orientation of the study, and the research strategies that were applied to achieve the goals.

i. Field methods: This section will describe all field methods, techniques, and strategies and the reasons for using them. It will also describe field conditions, relevant topographic/physiographic features, vegetation conditions, soil types, stratigraphy, general survey results, and the reasons for eliminating any uninvestigated areas.

j. Laboratory and analysis methods: This section will explain the laboratory methods employed and the reasons for selecting them. It will reference accession or catalog numbers of any collections, photographs, or

field notes obtained during the study and state where these materials are permanently housed. It will also describe and justify the specific analytical methods used, including any quantitative analysis of the data, and discuss limitations or problems with the analysis.

k. Results: This section will describe all cultural resources found during the study. It will minimally include each site's description (including size, depth, and artifact density); its location (USGS quad, legal description, elevation, and address if appropriate); the amounts and types of remains recovered; its environmental setting; its current condition; the direct and indirect impacts of the project upon it; and any additional interpretations (e.g., site type, cultural components, and human behavioral information).

l. Evaluation and conclusions: This section will formulate conclusions about the location, size, condition, and distribution of the resources found; their relationships to other sites in the area; and their possible importance in terms of local and regional prehistory, protohistory, and history. It will also relate the results of the study to the stated goals; identify any changes in the goals; assess the reliability of the analysis; and discuss the potential of and goals for future research.

m. Recommendations: This section will recommend any further work deemed necessary. It will summarize Phase II evaluation measures that would be needed to determine whether specific resources are eligible for the National Register of Historic Places, as well as a time and cost estimate for this work. It will also describe any areas that were inaccessible, and recommend future treatment of them. If the Contractor concludes that no further work is needed at any site, the evidence and reasoning supporting this recommendation will be presented.

n. References: This section will provide bibliographic references in American Antiquity format for every publication cited in the report. References not cited in the report may be listed in a separate "Additional References" section.

o. Appendix: This section will include the Scope of Work, resumes of project personnel, copies of all correspondence relating to the study, and any other pertinent information referenced in the text. It will also include State site forms for all sites identified during the survey, including find spots and previously recorded sites.

p. Figures: The location of all sites and other features discussed in the text will be shown on a legibly photocopied USGS map bound into the report. In addition, the locations of all subsurface tests will be indicated on maps of appropriate scale and detail and keyed to the subsurface testing forms included with the field notes. Other recommended figures are regional and project maps, photographs of the project area, and line drawings or photographs of diagnostic artifacts, structures, and unit or feature profiles.

q. Tables: The report should include tables of cultural materials by site and provenience (for example, excavation unit and level). Information that may require more detailed tabulation includes lithic tool types and raw materials, ceramic attributes, and floral and faunal remains.

5.06 A cover letter submitted with the final contract report will include the project budget.

5.07 The Contractor will submit to the Contracting Officer's representative the negatives for all photographs that appear in the final report.

6.00 REPORT FORMATS

6.01 The field report for this particular contract will consist of a telephoned report of the survey results made by the Contractor to the Contracting Officer's representative on the next working day following completion of field work.

6.02 There are no format requirements for the field notes; however, they must be legible. If the original handwritten notes are illegible, they should be typed.

5.03 Formats for both the draft and final contract reports are as follows:

a. The Contractor will present information in whatever textual, tabular, or graphic forms are most effective for communicating it.

b. The draft and final reports will be divided into easily discernible chapters, with appropriate page separations and headings.

c. The report text will be typed, single-spaced (the draft report should be space-and-one-half or double-spaced), on good quality bond paper, 8.5 inches by 11.0 inches, with 1.5-inch binding and bottom margins and 1-inch top and outer margins, and may be printed on both sides of the paper. All pages will be numbered consecutively, including plates, figures, tables, and appendices.

d. All illustrations must be clear, legible, self-explanatory, and of sufficiently high quality to be reproduced easily by standard xerographic equipment, and will have margins as defined above. All maps must be labeled with a caption/description, a north arrow, a scale bar, township and range, map size and dates, and map source (e.g., the USGS quad name or published source). All photographs or drawings should be clear, distinct prints or copies with captions and a bar scale.

7.00 MATERIALS PROVIDED

7.01 The Contracting Officer's representative will furnish the Contractor with access to any publications, records, maps, or photographs that are on file at the St. Paul District headquarters that are appropriate to the study being undertaken.

8.00 SUBMITTALS

8.01 The field work completion date for this project will be June 23, 1989. The Contractor will contact the Contracting Officer's representative at least 5 days before the field work begins to discuss the work schedule and plans.

8.02 The Contractor will submit reports according to the following schedules:

a. Field report: The Contractor will phone the Contracting Officer's representative on the next working day following completion of field work with the results of the survey, i.e., whether cultural resources were found within any of the proposed borrow areas.

b. Draft contract report: Five (5) copies of the draft contract report will be submitted no later than 15 days after completion of the field work. The draft contract report will be reviewed by the Corps of Engineers, the State Historic Preservation Officer, the State Archeologist, and the National Park Service. The draft contract report will be submitted according to the report and contract specifications outlined in this scope of work.

c. Project field notes: One legible copy of all the project field notes will be submitted with the draft contract report.

d. Final contract report: The original and 15 copies of the final report will be submitted within 30 days after the Contractor receives the Corps of Engineers comments on the draft report. The final report will incorporate all the comments made on the draft report.

9.00 CONDITIONS

9.01 Failure of the Contractor to fulfill the requirements of this Scope of Work will result in rejection of the Contractor's report and/or termination of the contract.

9.02 Neither the Contractor nor his representative shall release any sketch, photograph, report, or other materials of any nature obtained or prepared under the contract without specific written approval of the Contracting Officer's representative prior to the acceptance of the final report by the Government. Dissemination of survey results through papers at professional meetings and publication in professional journals is encouraged. However, professional discretion should be used in releasing information on site locations where publication could result in damage to cultural resources.

9.03 All materials, documents, collections, notes, forms, maps, etc., that have been produced or acquired in any manner for use in the completion of this contract shall be made available to the Contracting Officer's representative upon request.

9.04 Principal investigators will be responsible for the validity of material presented in their reports. In the event of controversy or court challenge, the principal investigator(s) will be placed under separate contract to testify on behalf of the Government in support of the findings presented in their reports.

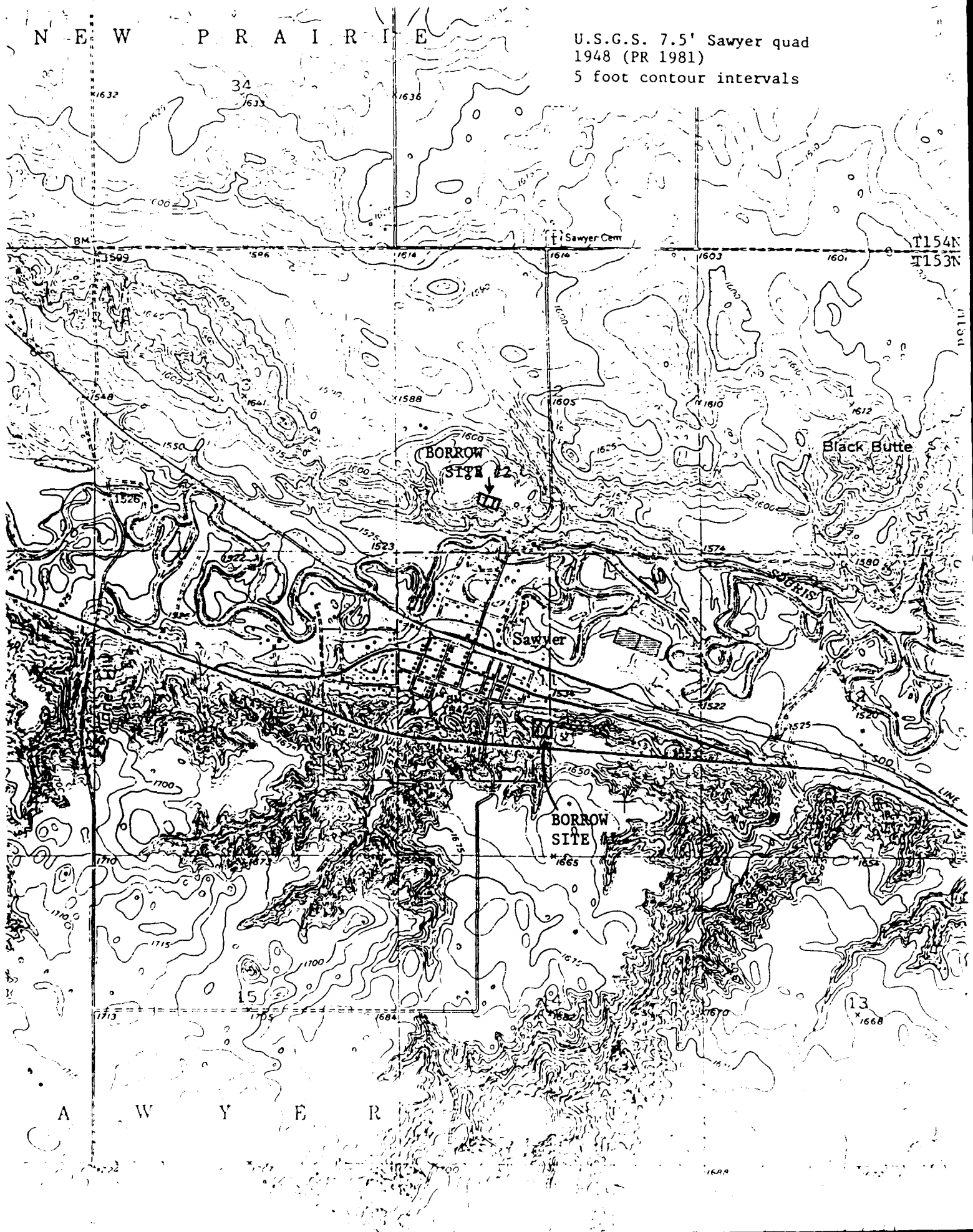
9.05 The Contractor will be responsible for adhering to all State laws and procedures regarding the treatment and disposition of human skeletal remains. If human remains are encountered, the Contracting Officer's representative will be contacted immediately. Any human remains recovered will be treated with respect and will not be placed on public display.

[illegible]

17

N E W P R A I R I E

U.S.G.S. 7.5' Sawyer quad
1948 (PR 1981)
5 foot contour intervals



APPENDIX B

Site Form

NDCRS SITE FORM
 ARCHEOLOGICAL SITES

Page 1

SITS # 3,2 W.D. 5,8
 State County Site Number

Field Code P.E.-8,9-W.D.2 Site Name _____
 Field Code _____ Site Name _____

Map Quad _____ B,U,R,L,I,N,G,T,O,N
 Map Quad _____

LTL	Twp	<u>1,5,5</u>	R	<u>0,8,4</u>	Sec	<u>0,1</u>	QQQ	<u>4</u>	QQ	<u>8</u>	Q	<u>5</u>
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____
LTL	Twp	_____	R	_____	Sec	_____	QQQ	_____	QQ	_____	Q	_____

1. N
2. E
3. S
4. W
5. NE
6. SE
7. SW
8. NW
9. C

I. SITE I.D.

II. SITE DESCRIPTION

FEATURE TYPE	CULTURAL MATERIAL	
<input type="checkbox"/> Conical Timber Lodge	<input checked="" type="checkbox"/> Bone	<u>1,48,0,0</u> m. x m. Site Area
<input checked="" type="checkbox"/> CM Scatter	<input type="checkbox"/> Ceramics	_____ Cultural Depth cm.
<input type="checkbox"/> Earthlodge Village	<input type="checkbox"/> Charcoal	<input type="checkbox"/> Depth Indicator
<input type="checkbox"/> Earthworks	<input type="checkbox"/> Copper	
<input type="checkbox"/> Fortification	<input type="checkbox"/> Faunal Remains	CULTURAL/TEMPORAL
<input type="checkbox"/> Grave	<input type="checkbox"/> Fire Cracked Rock	AFFILIATION
<input type="checkbox"/> Hearth	<input type="checkbox"/> Floral Remains	=====
<input type="checkbox"/> Jump	<input type="checkbox"/> Fossil	<input type="checkbox"/> Paleo
<input type="checkbox"/> Mound	<input type="checkbox"/> Hide, Hair, Fur	<input type="checkbox"/> Archaic
<input type="checkbox"/> Other Rock Features	<input type="checkbox"/> Human Remains	<input type="checkbox"/> Late Prehistoric
<input type="checkbox"/> Pit	<input checked="" type="checkbox"/> Projectile Point	<input type="checkbox"/> Historic
<input type="checkbox"/> Quarry/Mine	<input type="checkbox"/> Shell	<input checked="" type="checkbox"/> Period Unknown
<input type="checkbox"/> Rock Art	<input checked="" type="checkbox"/> Stone, Chipped	
<input type="checkbox"/> Rock Shelter	<input type="checkbox"/> Stone, Ground	
<input type="checkbox"/> Stone Circle	<input type="checkbox"/> Trade Good	
<input type="checkbox"/> Trail	<input type="checkbox"/> Wood	
<input type="checkbox"/> Miscellaneous	<input type="checkbox"/> Other	
<input type="checkbox"/> Isolated Find	<input checked="" type="checkbox"/> CM Density	<input checked="" type="checkbox"/> Basis for Dating

III. ENVIRONMENT

<input checked="" type="checkbox"/> Landform 1	<u>1,5</u> Landform 2	<input checked="" type="checkbox"/> Slope/Exposure	<u>2</u> Ecosystem
<input type="checkbox"/> Landform 1	_____ Landform 2	<input type="checkbox"/> Slope/Exposure	<input type="checkbox"/> Ecosystem
Elevation	Drainage System	View, Degree	View, Distance
<u>4,9,1</u> m.	<u>S,O,U,R,I,S,R,I,V,E,R</u>	<u>1</u>	<u>4</u>
Dist Perm Water	Perm Water Type	Dist Seas Water	Seas Water Type
<u>1,5,2</u> m.	<u>3</u>	<u>10,1</u> m.	<u>0</u>

IV. C.R.M.

<u>3</u> Ownership	<input type="checkbox"/> Ownership
<u>10,6,12,2,18,9</u> Fieldwork Date	_____ Fieldwork Date
<u>5</u> Site Condition	<input checked="" type="checkbox"/> Collection
<input type="checkbox"/> Test/Probe	<input type="checkbox"/> Excavation
Additional Information	<u>4</u> Management Recommendation

SHSND USE

<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> Soil Association	<input type="checkbox"/> Ecozone	<input type="checkbox"/> Area Signf	_____ MS Number
<input type="checkbox"/> CR Type	<input type="checkbox"/> Verified Site	<input type="checkbox"/> Non-Site	<input type="checkbox"/> E C F <input type="checkbox"/> T F
<input type="checkbox"/> State Registry	<input type="checkbox"/> National Register		

NDCRS ARCHEOLOGICAL AND HISTORICAL SITE FORMS
Field Code PE-89-WD2 Descriptive Section SITS # 32WD58
Page 2

1. Access From Burlington, take Ward County 10 west across Souris River to junction of Ward County 15. Turn north on 10 and 15 and continue .5 miles to end of cultivated field on east side of road. Turn onto trail to gate in field. The site lies within this field.

2. Description of Site This site is located on the west facing sideslopes of moderate to gentle relief immediately above a sharp meander of the Souris River's east bank. The terrain forms a gently sloping plain with rolling hills overlooking the river. The area immediately east is the dissected and rugged valley wall. The site consists of a very sparse and widely dispersed scatter of cultural material consisting of lithic tools, debris and bone fragments. The site area is found in the field with some 80-85% visibility at the time of survey. It covers virtually the entire field. The materials are not concentrated. Occassionally 2-3 artifacts are fairly close, but most are widely scattered like a series of isolates in the field. The site would appear to have but limited potentials.

3. Description of Cultural Materials (Quantify and Ident.)

1 Non-diagnostic KRF projectile point tip	
1 Retouched flake of KRF	
2 Utilized flakes of KRF	Occassional fragments of
2 Secondary flakes of KRF	unidentifiable bone (10+)
1 KRF core fragment	
1 Quartzite tertiary flake	
2 Chert tertiary flakes	
3 Chert secondary flakes	
<u>13</u> # items observed	<u>0</u> # items collected

4. Artifact Repository

5. Description of Subsurface Testing

No subsurface testing was conducted at the site during the initial recordation.

Recorded By M. Floodman Date 6/22/89

6. Current Use of Site Cultivated field

7. Owner's Name/Address unknown

8. Vegetation Sparse and immature wheat and onions on the east edge of the site area.

9. Cover (% Visible Ground) 80-85%

10. Man Hours on Site 1 hour

11. Project Title Ward County Borrow Areas for the Souris River Project PI M. Floodman

12. Report Title Cultural Resources Survey of Borrow Areas for the Sawyer and Burlington to Minot Levee Construction, Souris River Basin Project, Ward Co. ND Author M. Floodman

13. Other Published References None

14. Descriptions of Collections Observed None

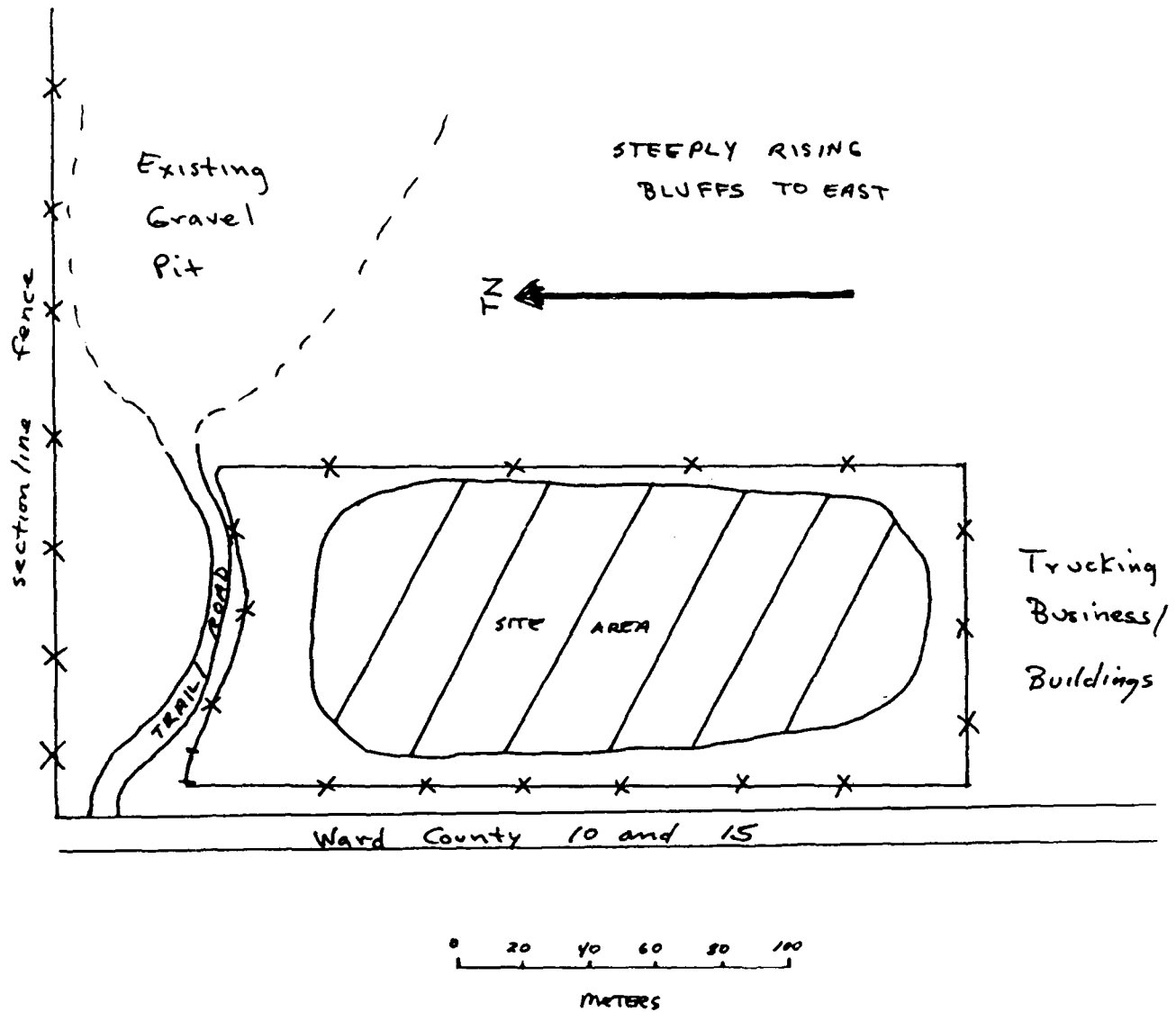
15. Owner/Address of Collections Observed N/A

16. Statement of Integrity The site area is disturbed by modern cultivation practices. The upper plowzone contexts lack integrity. The potential for buried, subplowzone cultural contexts has not been determined. However, from the very sparse content from surface inspection, the site would appear to have limited potentials.

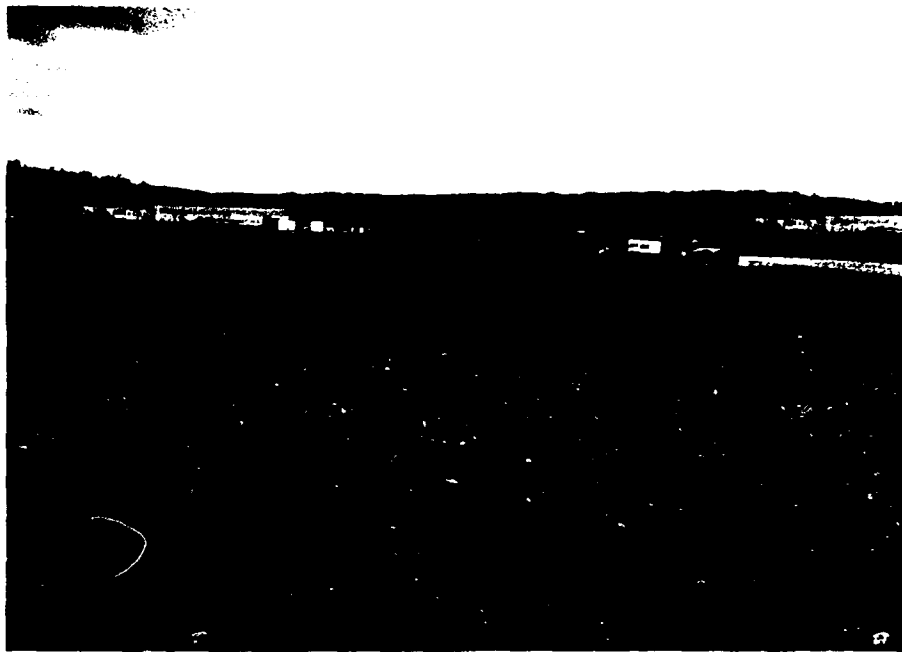
17. Statement of Significance The site is of undetermined significance and NRHP eligibility pending a subsurface test program to fully assess the nature and extent of the site cultural contexts in the subplowzone areas. If intact, datable deposits can be verified, the site is potentially a significant resource.

18. Comments/References The actual borrow areas may not directly impact the site. The actual borrow areas could be confined to the hill areas east of the site/field limits.

Recorded By: M. Floodman Date 6-22-89



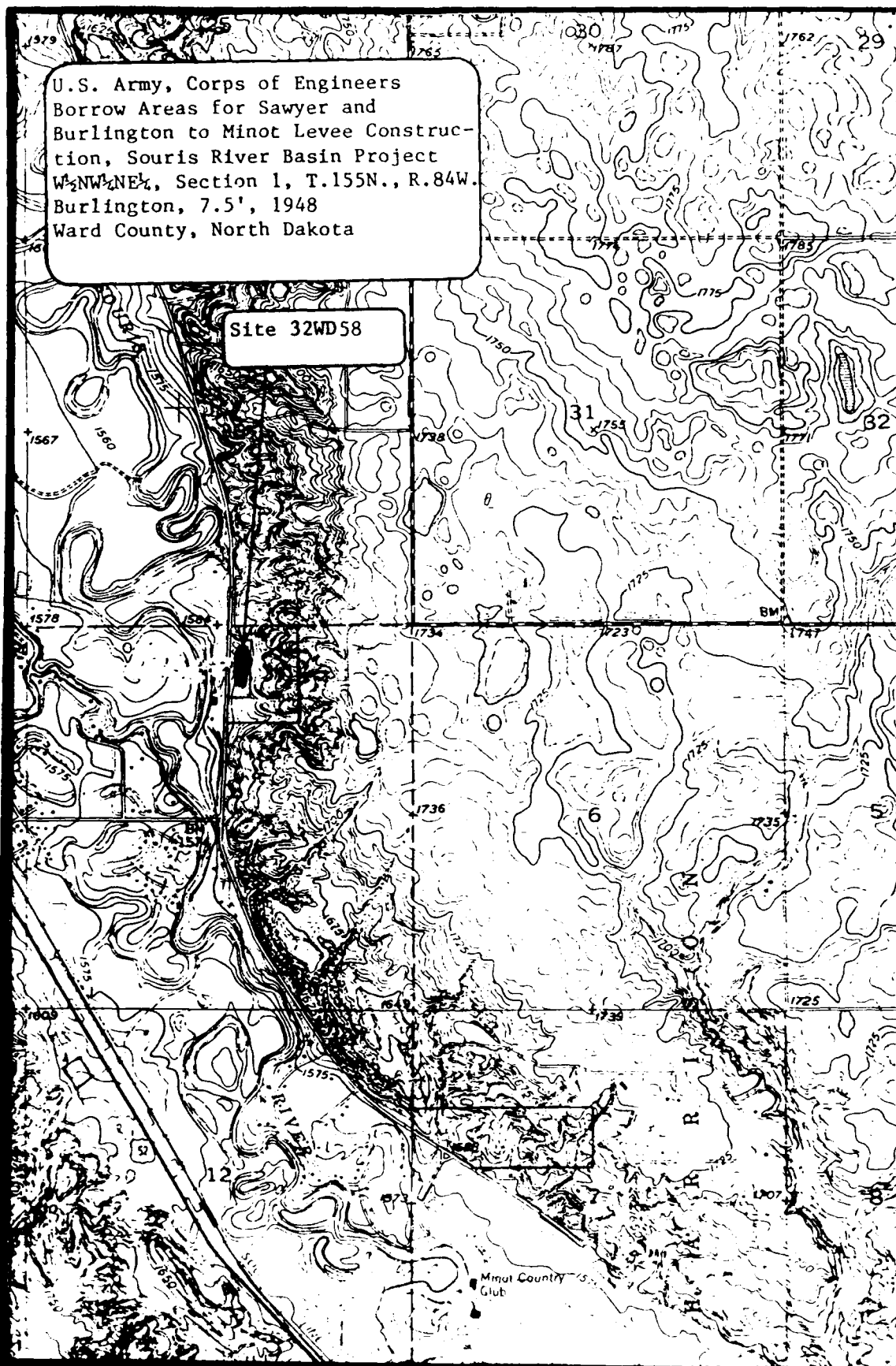
SKETCH MAP PE-89-WD2
NE $\frac{1}{4}$ NW $\frac{1}{4}$ SECTION 1
T155N R84W



Site 32WD58, Overview to south-southeast.

U.S. Army, Corps of Engineers
Borrow Areas for Sawyer and
Burlington to Minot Levee Construc-
tion, Souris River Basin Project
W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 1, T.155N., R.84W.
Burlington, 7.5', 1948
Ward County, North Dakota

Site 32WD58



SCALE 1:24 000



0 1000 2000 3000 4000 5000 6000 7000 FEET
0 1 KILOMETER

